COASTAL CONSERVANCY

Staff Recommendation
June 5, 2008

COASTAL PRAIRIE ENHANCEMENT FEASIBILITY STUDY

File No. 08-031-01
Project Manager: Deborah Hirst

RECOMMENDED ACTION: Authorization to disburse up to $639,000 to Ocean Song Farm and Wilderness Center to undertake a feasibility study for enhancement of coastal prairie resources on 100,000 acres in Marin and Sonoma counties.

LOCATION: Sonoma and Marin Counties

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Coastal Prairie Habitat Mapping Region and Enhancement Sites

Exhibit 3: Department of Fish and Game Statewide Mapping Project Map

Exhibit 4: Coastal Prairie and Holcus Photographs

Exhibit 5: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of up to $639,000 (six hundred thirty nine thousand dollars) to Ocean Song Farm and Wilderness Center ("OSFWC") to prepare a coastal prairie enhancement feasibility study for coastal prairie habitat in Sonoma and Marin counties, subject to the condition that prior to disbursement of Conservancy funds, OSFWC shall submit for the review and approval of the Conservancy's Executive Officer a work program, including a schedule and final budget, and the names of all contractors that OSFWC intends to use to complete the project."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with the purposes and objectives of Chapter 6 of Division 21 of the Public Resources Code, regarding enhancement of coastal resources.
2. The proposed project is consistent with the Project Selection Criteria and Guidelines, last updated by the Conservancy on September 20, 2007.
3. OSFWC is a nonprofit organization existing under Section 501(c)(3) of the Internal Revenue Service Code and whose purposes are consistent with Division 21 of the Public Resources Code."

PROJECT SUMMARY:

The proposed authorization will enable Ocean Song Farm and Wilderness Center ("OSFWC") to develop a coastal prairie habitat enhancement feasibility study for coastal prairie habitat in Marin and Sonoma Counties. Specifically, OSFWC will map and classify coastal prairie resources on 100,000 acres in Marin and Sonoma counties; prepare enhancement volunteer training materials; undertake habitat enhancement activities on 35 acres using treatment methods for different levels of velvet grass (*Holcus lanatus*) infestation; conduct tours and workshops to promote regional coordination; and prepare initial recommendations for coastal prairie resource conservation in Sonoma and Marin counties (Exhibits 1 and 2). With support from the Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) and University of California Davis Bodega Marine Laboratory and Reserve (BML), OSFWC will address three of the top priorities identified in the November 2006 Sonoma-Marin Coastal Prairie Workshop held by the Sonoma-Marin Grassland Working Group (SMGWC) with Conservancy funding: mapping coastal prairie resources, finding restoration techniques to effectively counter invasive species, and coordinating communication on regional coastal prairie protection efforts.

The mapping component is an essential step for conservation priority setting and restoration planning to protect the remaining stands of native coastal prairie in the region. Less than 10% of native coastal prairie habitat still remains from Big Sur up to the Oregon coast. Coastal prairie is a highly diverse community of native perennial grasses and forbes that supports the highest plant diversity of all North American grasslands. It is identified as an endangered plant community in the California Natural Diversity Database and is recognized as an environmentally sensitive habitat area by the Coastal Commission. An estimated 90% of California's rare and endangered plant species live in grassland ecosystems and a mere 1% of California's native grasslands still survive.

The Department of Fish and Game (DFG) is developing a State Vegetation mapping database, including grasslands which are ranked as the sixth most endangered ecosystem in North America (Exhibit 3). Wildlife Conservation Board funds for the effort are currently being directed to projects in the Central Valley. Roughly one quarter of the state is currently mapped at the fine-scale resolution necessary for grasslands, and there is little chance that additional funds will be available in the near term. The proposed project will meet the urgent need to map Sonoma and Marin's coastal prairie resources in order to plan for regional conservation (Exhibit 4).

OSFWC's mapping team will include key DFG staff who have contributed to the creation of the statewide mapping method and were involved with recent mapping projects in Napa County and

at Point Reyes. The method includes classification of vegetation types, review of aerial photographs, field survey to refine a predictive model based on information gathered and development of a final ARC-View Geographic Information System (GIS) data layer of quality coastal prairie vegetation types and locations. An additional level of field survey and mapping detail will be possible at the five enhancement sites selected for the proposed project: Bodega Head, Ocean Song Farm and Wilderness Center, Bodega Pastures, the Estero Americano Preserve and Occidental Arts and Ecology Center. The end result will be a guide to the location of high quality coastal prairie resources for approximately 100,000 acres of coastal terrace area in Sonoma and Marin that will be compatible with the DFG's State Vegetation database as well as national vegetation mapping systems. This Sonoma-Marin coastal prairie data will be made available to regional resource managers, agencies, organizations and interested parties, and will be archived in the DFG database. OSFWC will subsequently engage with agency and organization partners on priorities for coastal prairie resource conservation in Marin and Sonoma using this data as described below.

The proposed project will also test enhancement measures on 35 acres of coastal prairie habitat by treating holcus, an invasive grass, at low, medium and high levels of infestation with different primary techniques including sheep grazing, cattle grazing, mowing, hand-pulling, and use of an approved grass-specific herbicide in controlled areas followed by replanting with native species. Holcus was selected as the target invasive species based on the criteria that it moves toward 100% monoculture, it changes the soil to the detriment of native species, there are no clear Best Management Practices known to stop its spread, and it is rapidly advancing on many of the resource protection areas of Marin and Sonoma.

OSFWC will work with private property owners and public land managers to conduct enhancement activities using the infrastructure available on the five sites such as rotational grazing fencing and watering systems (Exhibit 4). The sites were selected in order to conduct enhancement using five primary techniques in paired plots with similar characteristics in order to evaluate the efficacy of treatments with varying levels of holcus infestation over the 3-year project period. Each of the sites will be up to five acres in size and the treatment on the sites will use a combination of the primary treatment methods and follow-up treatment with hand-pulling or hoeing depending on the site conditions. The cattle and sheep grazing treatment will be done in an intense, late-season approach to maximize the impact on the holcus species. The targeted herbicide application will be done on sites with nearly 100% holcus cover. These sites will subsequently be replanted with native grasses. The application will be done away from any watercourse and timed to avoid rain to prevent run-off and maximize the effectiveness of the treatment on the holcus. Mowing and hand removal with replanting of natives will be done in an area where past farming and grazing activity occurred. Overall, the project will employ techniques property owners will be likely to continue after the project is completed, while also collecting data to analyze for the development of Best Management Practices for different infestation levels for holcus. Without the proposed project, land owners and public agencies would be unlikely to collect data at the level proposed for the project due to limited funds for resource management and the expertise necessary for measuring some of the plant species outcomes.

Through the proposed project, OSFWC will strengthen communication among landowners,

researchers, resource agencies, the public and others interested in the protection of this highly biologically diverse habitat. OSFWC will develop a 6-week training program for volunteers to support enhancement activities on the five program sites. Volunteers may track outcomes for other invasive species and consider a coastal prairie seed collection effort. Educational outreach materials will be designed for use in the training and on tours of the sites to promote discussion of coastal prairie resource management over the 3-year project period. OSFWC, BML and participants in the project will hold a 2011 coastal prairie workshop at the Bodega Marine Lab, similar in format to the highly successful November 2006 event funded by the Conservancy, to present the Sonoma-Marin mapping data and Best Management Practice recommendations drawn from the holcus project, and to discuss outcomes from other resource managers' restoration and invasive species management efforts between 2006 and 2011. OSFWC will produce a final report with initial recommendations for regional coastal prairie resource protection and enhancement based on the final Marin-Sonoma coastal prairie mapping data, input from agency partners, results of the habitat restoration trials, and the workshop proceedings. The report will include details on the mapping method and vegetation classification system used to create the Marin-Sonoma coastal prairie GIS data layer and Best Management Practice recommendations from the results of the 35-acre coastal prairie enhancement project.

OSFWC is a private nonprofit organization located in western Sonoma County with a farm and open space learning center which inspires and educates people of all ages to live in harmony with nature. OSFWC successfully completed the Coastal Prairie Stewardship Study with Conservancy support. The proposed project builds on that initial effort. OSFWC also participates in the West County/Coastal Collaborative Acquisition Working Group facilitated by the Conservancy.

Site Description: The proposed project will map coastal prairie resources over approximately 100,000 acres within the fog line areas of Sonoma and Marin counties. The area is characterized by deep canyons, groves of redwood and Douglas fir, upland meadows, coastal terraces and bluffs, and floodplains, riparian areas and bays including Salmon Creek, the Estero Americano and Tomales Bay. Large expanses of grassland in the area have supported dairy and cattle operations and many acres are now publically held in parks and open space. The project will implement enhancement activities on five coastal prairie project sites within Sonoma. The sites will be up to 5 acres each for a total enhancement project area of 35 acres. The sites will be located on previously grazed and currently working ranch lands. The Sonoma Land Trust's (SLT) Estero Americano Preserve consists of rolling hillsides and steep gullies above the Estero Americano which forms the border of Marin and Sonoma counties at the coast. SLT has secured grants and installed cattle fencing at the Preserve that will enable rotational cattle grazing on-site. BML and DPR will be partnering on resources at Bodega Head where initial mapping of holcus has already been completed.

Ocean Song Farm and Wilderness Center is located on the top of coastal hills above Bodega Bay and offers good stands of coastal prairie on previously grazed land which has potential to mow for holcus treatment. Bodega Pastures is a private sheep grazing operation located within the fog line of coastal Sonoma and is supportive of managing for coastal prairie resource enhancement. Occidental Arts and Ecology Center is a nonprofit environmental center located on Coleman Valley Road and has a vegetation management plan that will allow for mowing to treat holcus located on the property.

Project History: With support from the Conservancy, OSFWC conducted the Coastal Prairie Stewardship project 2003 and helped form the Sonoma-Marin Grasslands Working Group (SMGWG). The SMGWG participants include University of California Davis Bodega Marine Laboratory and Reserve, DPR, Occidental Arts and Ecology Center, OSFWC, Sonoma Agricultural Preservation and Open Space District, Sonoma Land Trust and Sonoma State University. The project supported the development of a network of resource managers and partners interested in coastal prairie and culminated in the highly successful Grasslands Workshop in November of 2006. Over 65 representatives from 24 agencies, academic institutions, land managers, land planners, conservation organizations, community groups, and private landowners participated in discussion to develop conservation, management and research priorities for coastal prairie in Sonoma and Marin counties. From this workshop OSFWC and the SMGWG produced a document summarizing steps identified for a strategic approach to protecting this highly diverse habitat ecosystem, "Conservation Priorities for Coastal Prairie in Sonoma and Marin Counties". The results presented at the workshop, including those OSFWC reported from the Stewardship project's sheep grazing and burning study, underscored the complexity of the interrelations between native and invasive species in California's grasslands and highlighted the need for greater understanding of how to manage the remaining coastal prairie resources across the area. Building from this work, the proposed project will map existing coastal prairie resources, refine Best Management Practices for one of the most problematic invasive species and coordinate communication among agency partners to develop initial recommendations for regional priorities to protect and enhance coastal prairie habitat.

PROJECT FINANCING:

Coastal Conservancy	$639,000
Sonoma County SCAPOSD	$ 50,000
University of California Davis	$ 45,000
DPR, SLT, other sources (In-kind)	$221,841
Total Project Cost	**$955,841**

Funds for the proposed project are anticipated to come from the Conservancy's FY06/07 authorization of Proposition 50 funds ("Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002"). Proposition 50 authorizes the use of these funds for the purpose of protecting coastal watersheds through projects to restore land and water resources. Funds may be used for planning and permitting associated with restoration, as well as the restoration activities. (Water Code Section 79570). The proposed project will accomplish these purposes by facilitating restoration of land resources though production of habitat map layers for coastal prairie compatible with statewide mapping standards, by completing 35 acres of habitat restoration and by producing initial recommendations for coastal prairie conservation in Marin and Sonoma counties.

As required by Proposition 50, the proposed project is also consistent with local and regional watershed plans (Water Code Section 79507). Consistent with the Marin County Watershed Management Plan, the proposed project will map coastal prairie habitat to identify terrestrial habitat for protection and treat an invasive exotic species to enhance watershed land (April 2004, pages 9 and 10). Sonoma County coastal watersheds are included in the North Coast Regional

Watershed Initiative Chapter of the State Water Planning Strategic Plan (Section 21. and 2.3.12), and consistent with this regional plan, the proposed project will protect water quality by enhancing native coastal prairie habitat and avoiding erosion and sedimentation in the project area (North Coast Regional Water Quality Control Board, February 2005).

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project will be undertaken pursuant to Section 31111 and Chapter 6 of the Conservancy's enabling legislation, Division 21 of the Public Resources Code (Sections 31251-31270), regarding enhancement of coastal resources.

Section 31111 authorizes the Conservancy to award grants to nonprofit organizations to undertake feasibility studies.

Sections 31251 authorizes the Conservancy to award grants to nonprofit organizations and public agencies for the purpose of enhancement of coastal resources that, because of natural or human-induced events or incompatible land uses have suffered loss of natural values. Land use activities in Marin and Sonoma counties have resulted in loss of coastal prairie habitat. The proposed project will provide detailed resource mapping to locate high quality stands of native coastal prairie, complete habitat restoration in holcus infested areas on 35 acres and provide initial restoration recommendations based on the mapping and enhancement outcomes.

As required in Section 31252, the proposed project is consistent with the Sonoma and Marin County Local Coastal Programs as described in the "Consistency with Local Coastal Program Policies" section below.

Pursuant to Section 31253, the Conservancy may provide up to the total cost of any coastal resource enhancement project. OSFWC and its partners are providing a match of 33% for this project. In determining the amount of Conservancy funding for this project, the factors identified in §31253 have been considered and applied, as described in detail below, under the heading "Consistency With Conservancy's Project Selection Criteria & Guidelines.**"**

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5, Objective A** of the Conservancy's 2007 Strategic Plan, the proposed project will complete a planning phase that will lead toward enhancement project implementation in Marin and Sonoma counties by mapping coastal prairie resources, analysis of completed habitat map data, and coordination with regional organizations and agencies on the development of initial coastal prairie habitat priorities in a final coastal prairie workshop and report.

Consistent with **Goal 5, Objective B** of the Conservancy's 2007 Strategic Plan, the proposed project will enhance 35-acres of coastal prairie habitat with holcus infestations of differing degrees to develop Best Management Practices for controlling this invasive species.

Consistent with **Goal 5, Objective D** of the Conservancy's 2007 Strategic Plan, the proposed

project will treat non-native invasive holcus on 35-acres on coastal prairie to identify best management practices, coordinate with local organizations and agencies to identify regional restoration priorities and produce education materials on treatment of holcus infestation of different levels.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.

2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.

3. **Support of the public:** The project has received support from the community and elected officials including Assemblymember Patty Berg and Supervisor Mike Reilly. Letters of support are included in Exhibit 5.

4. **Location:** The proposed project will be conducted within the fog line in the coastal zone of Sonoma and Marin counties.

5. **Need:** Partner organization funding would not be sufficient to realize implementation of the Coastal Prairie Mapping and Restoration project without Conservancy participation.

6. **Greater-than-local interest:** The Coastal Prairie Mapping and Restoration project is of state-wide interest due to the importance of locating the remaining stands of coastal prairie habitat in the state-wide grassland mapping project, and the need to restore this habitat for the ecosystem diversity it offers regionally.

Additional Criteria

7. **Urgency:** Less that 10% of California's native Coastal Prairie still exists. It is urgent to map and document remaining quality stands of the ecosystem and complete efforts to identify effective ways to treat different levels of holcus infestation.

8. **Resolution of more than one issue:** Mapping the location and quality of coastal prairie resources and comparing restoration treatment outcomes for the five main methods for holcus will provide information to land managers and academics for regional resource enhancement and conservation planning.

9. **Leverage:** Funding for this project from the Conservancy will leverage other state

funding for the watershed, see "Project Finance" above.

10. **Innovation:** The project will combine statewide data collection standards, local restoration site data and cooperation among multiple agencies to create resource management recommendations and maps for regional planning.

11. **Readiness:** OSFWC is ready to implement the proposed project with the support of multiple agencies and organizations.

12. **Cooperation:** OSFWC is collaborating with the Sonoma-Marin Grasslands/Coastal Prairie Working Group, research institutions, resource agencies, watershed groups and property owners in coastal Sonoma and Marin to promote coastal prairie stewardship.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the Sonoma County Local Coastal Program (LCP), certified in 1981 and revised in 1999. Section III of the LCP, Environmental Resources, includes resource management recommendations to protect coastal prairie grassland (Numbers 48-52). The Sonoma County General Plan Resource Conservation Element identifies grasslands as one of Sonoma's eight plant communities and includes conservation and protection policies in Section 5.1-2. Goal RC-5 states, "Promote and maintain the County's diverse plant and animal communities and protect biotic resources from development activities". The project will enhance 35 acres of coastal prairie habitat by treatment of invasive holcus consistent with this section. Goal RC-6 states, "Identify and protect rare and endangered species and their environment". The project will map coastal prairie resources in order to support prioritization of future restoration efforts consistent with County policies calling for the protection of biotic resources and endangered species.

The proposed project is consistent with the Marin Local Coastal Program, certified in 1982, with respect to the LCP Policies on Natural Resources. Section 5.b pertains to the protection of dunes and other sensitive land habitats in the coastal zone. The project will map coastal prairie resources in order to support prioritization of future conservation and enhancement efforts and will enhance 35 acres of coastal prairie habitat by treatment of invasive holcus consistent with this section and the natural resource protection policies of the LCP.

COMPLIANCE WITH CEQA:

The proposed mapping component of the project is statutorily exempt from review under the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15262, in that it involves only planning studies for possible future actions which the Conservancy has not approved, adopted, or funded. The mapping component of the project is also categorically exempt under Section 15306, in that it consists of data collection, research, and resource evaluation.

Section 15304 allows for the categorical exemption of projects that involve only minor alterations of land, water, and/or vegetation. The proposed 35 acre coastal prairie enhancement

and treatment of holcus component of the project is exempt under this section, since it involves the replanting of native grasses and the treatment of holcus on limited acreage and under various, strictly controlled methodologies designed to avoid any effects on environmentally sensitive habitat areas and endangered or special status species. Project sites of up to 5 acres each have been selected specifically to avoid sensitive habitat and special status resources. The sites are on lands previously grazed at OSFWC, OAEC and Bodega Head and on recently grazed lands at the Estero Americano Preserve and Bodega Pastures. The primary treatment methods for enhancing coastal prairie habitat and reducing holcus infestation will involve cattle and sheep grazing, mowing, hand pulling and herbicide application with subsequent replanting of native grasses. The grass-specific herbicide will be applied by individual backpack units or a small tractor equipped for direct spray in areas of less than five acres and where there is nearly 100% hocus cover. The timing and location of the treatment will prevent any run-off from rain and avoid any impacts outside the immediate enhancement sites. The herbicide treatment sites will be replanted with native grasses through the project.

Staff will file a Notice of Exemption upon authorization by the Conservancy.